
 National Transportation Safety Board <b>FACTUAL REPORT</b> AVIATION		NTSB ID: CEN10FA019		Aircraft Registration Number: N3234G	
		Occurrence Date: 10/14/2009		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Tahlequah	State OK	Zip Code 74464	Local Time 0450	Time Zone CDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer ROBINSON HELICOPTER		Model/Series R22 BETA		Type of Aircraft Helicopter	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>*** Note: NTSB investigators either traveled in support of this investigation or conducted a significant amount of investigative work without any travel, and used data obtained from various sources to prepare this aircraft accident report. ***</p> <p>HISTORY OF FLIGHT</p> <p>On October 14, 2009, approximately 0450 central daylight time, a Robinson Helicopter R22 Beta, N3234G, operated by a non-instrument rated private pilot, was destroyed when it impacted terrain near Tahlequah, Oklahoma. A post impact fire ensued. Night instrument meteorological conditions prevailed at the time of the accident. The personal flight was being conducted under the provisions of Title 14 Code of Federal Regulations (CFR) Part 91 without a flight plan. The private pilot and his passenger were fatally injured. The flight departed the pilot's private residence approximately 0445 and was en route to Tahlequah Municipal Airport (KTQH), Tahlequah, Oklahoma.</p> <p>According to family and friends, the pilot had been up all night watching movies. The pilot intended to fly to KTQH to meet a friend, hanger his helicopter, and go hunting. The helicopter never arrived and the friend departed the airport without reporting the overdue helicopter. Family members of the passenger filed a missing persons report on the afternoon of October 15, 2009, and the wreckage was located from the air the morning of October 16, 2009.</p> <p>PERSONNEL INFORMATION</p> <p>The pilot, age 26, held a private pilot certificate with a rotorcraft helicopter rating issued on July 31, 2009. He was issued a Third Class Airman Medical and Student Pilot certificate on April 28, 2008. The certificate contained no limitations.</p> <p>The pilot's flight log was not located in the wreckage and the pilot's family was not aware of the location of the flight log. At the time of application for the airman medical certificate on April 28, 2008, the pilot reported a total flight time of 21 hours. According to the Federal Aviation Administration (FAA), the pilot received his private pilot certificate on July 31, 2009. At the time of application for this certificate, the pilot reported a total flight time of 85 hours, all of which were logged in the Robinson R22. The application reflected 3.5 hours of night instruction and zero hours of instrument training.</p> <p>A review of FAA records revealed that a letter of investigation was sent to the pilot on September 2, 2009. The letter alleged that the pilot had provided "false or fraudulent information" on his medical certificate application dated April 28, 2008, and failed to report a motor vehicle action within 60 days as required by Federal Aviation Regulations. The letter discussed three separate alcohol-related motor vehicle actions that were recorded on the pilot's driving record. The dates of these offenses were July 14, 2003, January 26, 2004, and March 9, 2009.</p>					
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## Narrative (Continued)

According to the FAA, the pilot had not responded to the letter or provided further evidence or a statement regarding the letter. The FAA was in the process of initiating an enforcement action review when the accident occurred.

### AIRCRAFT INFORMATION

The accident helicopter, a Robinson Helicopter R22 Beta (serial number 4114), was manufactured in 2007. It was registered with the FAA on a standard airworthiness certificate for normal operations. A Lycoming O-360-J2A engine, rated at 145 horsepower, powered the helicopter.

The helicopter was registered to Trevor Noble, Terry Noble, and Robert Koudelka. The original maintenance records were not in the wreckage. Trevor Noble and Robert Koudelka had both been fatally injured in separate aviation accidents on November 5, 2007, and November 2, 2008, respectively. Terry Noble could not be located. The pilot's family had no knowledge as to the location of the maintenance records. A mechanic with Sevier County Choppers came forward and provided copies of the maintenance entries from maintenance performed on the accident helicopter. According to these copies, the most recent maintenance conducted on the helicopter was a 100-hour inspection, which was conducted in accordance with the R22 maintenance manual. This 100-hour inspection was completed on July 27, 2009, at an aircraft total time of 1,542.7 hours.

### METEOROLOGICAL CONDITIONS

Infrared satellite imagery of southeastern Oklahoma displayed clouds directly over the accident site. Doppler weather radar in Fort Smith, Arkansas, depicted no precipitation returns in the accident area at the time of the accident.

The National Weather Service (NWS) had issued AIRMET (Airman's Meteorological Information) Sierra for instrument flight rules and mountain obscuration for the accident helicopter's area of flight. Ceilings below 1,000 feet, visibility below three miles, and precipitation, including mist, were forecast.


The aviation area forecast for Oklahoma, issued by the NWS the day of the accident, forecasted overcast conditions at 1,500 feet with cloud tops at 6,000 feet, and visibility between three and five miles restricted by mist.

The closest official weather observation station was Tahlequah Municipal Airport (KTQH), Tahlequah, Oklahoma, located three nautical miles (nm) north of the accident site. The elevation of the weather observation station was 874 feet mean sea level (msl). The routine aviation weather report (METAR) for KTQH, issued at 0432, reported winds calm, visibility, five miles, sky condition overcast at 400 feet, temperature 13 degrees Celsius (C), dew point minus 12 degrees C, altimeter, 30.00 inches of Mercury (Hg).

The next closest official weather observation station was Davis Field Airport (KMKO), Muskogee, Oklahoma, located 22 nm southwest of the accident site. The METAR for KMKO, issued at 0453, reported winds 350 degrees at seven knots, visibility, 10 miles, sky condition overcast at 400 feet, temperature 12 degrees Celsius (C), dew point minus 12 degrees C, altimeter, 30.03 inches of Hg.

Several witnesses in the immediate vicinity of the departure location reported the weather as cold, low overcast skies with limited visibility due to light rain and mist. One witness stated that she was able to see stars the morning of the accident. She commented that it was common for the weather to be good at her house and poor everywhere else.

There was no record that the pilot obtained an approved weather briefing from the FAA Flight

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**Narrative** (Continued)

Service Station or Direct User Access Terminal System (DUATS).

**WRECKAGE AND IMPACT INFORMATION**

The accident scene was located adjacent a small running stream and approximately ½ mile from Hawkins Mountain, in open terrain vegetated with grass. The accident site was at an elevation of 800 feet msl and the helicopter impacted on a magnetic heading of 105 degrees.

Two adjacent ground scars were identified as the initial point of impact. The left ground scar measured three feet four inches long, one foot deep, and one foot wide. The scar was angular with its depth and was consistent with a main rotor strike. The right ground scar was located six feet to the right of the left ground scar. It measured four feet at its widest point and was five feet six inches in length. The dirt within the scar was pushed in the direction of the main wreckage. Portions of the right skid were embedded into the ground adjacent the right ground scar.

Plexiglas, the front and aft cross tubes, engine hoses and belts, broken fiberglass, torn metal, seat cushions, fragments from both doors, fragments of the instrument panel, and personal effects were located within the debris field.

A second ground scar was identified in the debris field, six feet east of the initial impact point. This scar measured seven feet three inches in length and was three inches deep and five inches at its widest point. A third ground scar was located approximately 170 feet east of the second ground scar. This scar measured eight feet five inches long, five inches deep, and was 18 inches at its widest point.


The main wreckage was located approximately 30 feet east of the third ground scar. The main wreckage consisted of the fuselage, main rotor, mast and transmission assembly, engine and fan assembly, tail boom, and tail rotor. The helicopter came to rest on its right side. The fuselage and main cabin area were charred, melted, and partially consumed by fire. Both fuel tanks were crushed, had been compromised, and exhibited exposure to heat and fire.

The tail boom was crushed and bent downward. A separation area was noted along a rivet line four feet inboard from the tail rotor gearbox. The tail rotor driveshaft was continuous from the gearbox forward to the flex coupling. The pitch control links were continuous. The blades on the tail rotor were arbitrarily labeled "A" and "B" for identification purposes only. Blade A exhibited a small tear on the trailing edge and blade B was unremarkable.

The mast and main rotor blades remained attached to the transmission and fuselage structure. Both main rotor blades were bent; one was bent 90 degrees and the second was bent 180 degrees opposite their design-mounted direction, and were torn, mangled, and exhibited exposure to heat and fire. The flight controls, including the collective and cyclic exhibited multiple separation points due to the fire and impact damage. The collective was down.

The engine remained attached to the fuselage and was removed for examination purposes. The bottom bank of spark plugs was removed and the engine was rotated through, by hand, at the fan. The engine rotated freely without resistance or binding. Gear train continuity was noted at the accessory housing. Tactile compression was noted on all four cylinders. Valve covers were removed on the 1/3 side of the engine and valve and rocker arm movement was noted. The engine cylinders were examined by use of a battery powered bore scope. The cylinders exhibited normal signs of operation. Both magnetos were removed and rotated by hand. Spark was noted at each lead. Both fuel and oil screens were found free of contaminants.

An examination of the caution panel bulbs revealed normal bulb signatures. The clutch bulb was stretched which, according to Robinson Helicopter, is consistent with the impact dynamics of the accident.

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## MEDICAL AND PATHOLOGICAL INFORMATION

The Office of the Chief Medical Examiner performed the autopsy on October 17, 2009, as authorized by the Office of the Chief Medical Examiner - Eastern Division, Tulsa, Oklahoma. The autopsy concluded that the cause of death was "internal injuries due to blunt force trauma."

During the autopsy, specimens were collected for toxicological testing performed by the FAA's Civil Aerospace Medical Institute (CAMI), Oklahoma City, Oklahoma (CAMI Reference #200900245001). Toxicology staff at CAMI noted that paperwork accompanying toxicology samples on the pilot indicated the blood source to be "RT. PLEURAL SPACE." Testing of the blood detected 20.92 ug/ml Acetaminophen, 0.125 ug/ml Amphetamine, 0.025 ug/ml Doxylamine, 1.338 ug/ml Methamphetamine, 2.077 ug/ml Norpropoxyphene, 0.49 ug/ml Propoxyphene, Dextromethorphan, and Dextroamphetamine. Testing of the liver tissue detected 0.281 ug/ml Amphetamine, 2.458 ug/ml Methamphetamine, 15.501 ug/ml Norpropoxyphene, 3.039 ug/ml Propoxyphene, Dextromethorphan, Doxylamine, and Dextroamphetamine.

A review of the pilot's dental records indicated that the pilot was prescribed a combination of propoxyphene and acetaminophen for pain following a tooth extraction and a tooth repair performed the day prior to the accident. The pilot's April 28, 2008, application for 3rd Class Airman Medical and Student Pilot Certificate indicated "No" in response to "Do You Currently Use Any Medication" and to all items under "Medical History," including specifically "Substance dependence or failed a drug test ever, or substance abuse or use of illegal substance in the last 2 years," "history of any conviction(s) involving driving ... while under the influence of alcohol or a drug; or ... actions involving an offense(s) which resulted in the denial, suspension, cancellation, or revocation of driving privileges ...," and "History of nontraffic convictions (misdemeanors or felonies)."

## ADDITIONAL INFORMATION


## Federal Aviation Regulations


Title 14 CFR Part 61.15(c, d, and e) required that pilots provide a written report of each motor vehicle action, which was a result of operating a vehicle while under the influence of drugs or alcohol, within 60 days of the occurrence. Title 14 CFR Part 67.403 prohibits pilots from making false statements on their medical certificate application.


## Robinson Pilot Operating Handbook

In section 2 - Limitations, of the R22 Pilot Operating Handbook, visual flight rules operations at night are permitted only when visual reference can be maintained due to object illumination provided by ground or adequate celestial illumination. According to Robinson Helicopter, flight by reference to the instruments is not approved; day or night.

Updated on Jul 22 2010 3:04PM

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<b>Landing Facility/Approach Information</b>					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used N/A	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: None					
<b>Aircraft Information</b>					
Aircraft Manufacturer ROBINSON HELICOPTER		Model/Series R22 BETA		Serial Number 4114	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Skid					
Amateur Built Acft? No	Number of Seats: 2	Certified Max Gross Wt. LBS		Number of Engines: 1	
Engine Type: Reciprocating	Engine Manufacturer: LYCOMING	Model/Series: O-360-J2A		Rated Power: 145 HP	
<b>- Aircraft Inspection Information</b>					
Type of Last Inspection 100 Hour	Date of Last Inspection 07/2009	Time Since Last Inspection Hours		Airframe Total Time 1543 Hours	
<b>- Emergency Locator Transmitter (ELT) Information</b>					
ELT Installed?/Type	ELT Operated?	ELT Aided in Locating Accident Site? No			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner  NOBLE TREVOR B		Street Address			
		City WILMINGTON	State DE	Zip Code 19801-1105	
Operator of Aircraft  Mark James Mahaney		Street Address			
		City Tahlequah	State OK	Zip Code 74464	
Operator Does Business As:			Operator Designator Code:		
<b>- Type of U.S. Certificate(s) Held: None</b>					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Personal					
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Name		City		State	Date of Birth	Age																																																																																								
On File		On File		On File	On File	26																																																																																								
Sex: M	Seat Occupied: Right	Occupational Pilot? No			Certificate Number: On File																																																																																									
Certificate(s): Private																																																																																														
Airplane Rating(s): None																																																																																														
Rotorcraft/Glider/LTA: Helicopter																																																																																														
Instrument Rating(s): None																																																																																														
Instructor Rating(s): None																																																																																														
Current Biennial Flight Review? 07/2009																																																																																														
Medical Cert.: Class 3		Medical Cert. Status: Without Waivers/Limitations			Date of Last Medical Exam: 04/2008																																																																																									
<table border="1"> <thead> <tr> <th>- Flight Time Matrix</th> <th>All A/C</th> <th>This Make and Model</th> <th>Airplane Single Engine</th> <th>Airplane Multi-Engine</th> <th>Night</th> <th colspan="2">Instrument Actual      Simulated</th> <th>Rotorcraft</th> <th>Glider</th> <th>Lighter Than Air</th> </tr> </thead> <tbody> <tr> <td>Total Time</td> <td>85</td> <td>85</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instruction Received</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument Actual      Simulated		Rotorcraft	Glider	Lighter Than Air	Total Time	85	85									Pilot In Command(PIC)											Instructor											Instruction Received											Last 90 Days											Last 30 Days											Last 24 Hours										
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Seatbelt Used? Yes		Shoulder Harness Used? Yes			Toxicology Performed? Yes		Second Pilot? No																																																																																							
<b>Flight Plan/Itinerary</b>																																																																																														
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<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
KTQH	0432	CDT	874 Ft. MSL	3 NM	4 Deg. Mag.
Sky/Lowest Cloud Condition: Thin Overcast			400 Ft. AGL	Condition of Light: Night	
Lowest Ceiling: Overcast			400 Ft. AGL	Visibility: 5 SM	Altimeter: 30.00 "Hg
Temperature: 13 °C	Dew Point: 12 °C	Weather Conditions at Accident Site: Instrument Conditions			
Wind Direction:	Wind Speed: Calm		Wind Gusts:		
Visibility (RVR): Ft.	Visibility (RVV) SM				
Precip and/or Obscuration: Mist					

<b>Accident Information</b>					
Aircraft Damage: Destroyed		Aircraft Fire: Ground		Aircraft Explosion: None	

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL	
First Pilot	1				1	
Second Pilot						
Student Pilot						
Flight Instructor						
Check Pilot						
Flight Engineer						
Cabin Attendants						
Other Crew						
Passengers	1				1	
- TOTAL ABOARD -	2				2	
Other Ground						
- GRAND TOTAL -	2				2	

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## Administrative Information

Investigator-In-Charge (IIC)

Jennifer Rodi

Additional Persons Participating in This Accident/Incident Investigation:

Dan Donnelly  
FAA Flight Standards District Office  
Oklahoma City, OK

Ken Martin  
Robinson Helicopter Company  
Torrance, CA

Troy Helgeson  
Lycoming Engines  
CO